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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/628,651 | 07/28/2003 | Joseph W. Harris | JWH / 59US | 4424 |

26875 7590 10/25/2005
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EXAMINER

IP, SIKYIN

ART UNIT PAPER NUMBER

1742

DATE MAILED: 10/25/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | | |
|------------------------------|--------------------------------------|--|--|
| Office Action Summary | Application No. 10/628,651 | Applicant(s) HARRIS, JOSEPH W. | |
| | Examiner Sikyin Ip | Art Unit 1742 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 9/6/05.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,5-7,22,25 and 35-42 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,5-7,22,25 and 35-42 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 39-42 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

The instant claimed limitation "fluxless solid brazing component" in claims 39 is not supported by the specification originally filed. Applicants are required to point out support in the specification as originally filed or delete said limitation. Silence is not a support for either negative or positive limitation. See *Ex parte Graselli*, 231 USPQ 393.

Claim Rejections - 35 USC § 103

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(f) or (g) prior art under 35 U.S.C. 103(a).

Claims 1, 5-7, 22, 25 and 35-42 are rejected under 35 U.S.C. § 103 as being unpatentable over PL 149319 in view of CN 1060052. (References are cited in parent application).

PL 149319 in the abstract discloses the features including the claimed solid brazing components – Cu alloy powder. The difference between PL 149319 and the claims are as follows: PL 149319 does not disclose the claimed Mn, liquidus, solidus, thermal arrest temperatures, and forms of the brazing component. However, the claimed Mn content reads on zero which suggests Mn can be eliminated from the brazing alloy. The claimed liquidus, solidus, and thermal arrest temperatures are material properties which would have been inherently possessed by the material disclosed by PL 149319. Therefore, the burden is on the applicant to prove that the product of the prior art does not necessarily or inherently possess characteristics attributed to the claimed product.

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In re Best, 195 USPQ, 430 and MPEP § 2112.01.

"Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established, In re Best, 195 USPQ 430, 433 (CCPA 1977). 'When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not.' In re Spada, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Therefore, the prima facie case can be rebutted by evidence showing that the prior art products do not necessarily possess the characteristics of the claimed product. In re Best, 195 USPQ 430, 433 (CCPA 1977)."

With respect to the form of the brazing component, CN 1060052 discloses brazing solder component could be formed into rods, ingots, strips, or powder. Therefore, it is contemplated within ambit of ordinary skill artisan to form the brazing component into form suitable for the brazing application such as a rod without paste and carrier. It is well settled that the form of reactants is believed mere a choice between well known forms of such substances. In the absence of evidence of some unobvious aspect of their selection, use of those substances would seem to add nothing of patentable significance to the instant claims. In re Austin, et al., 149 USPQ 685, 688.

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With respect to the recited "fluxless" limitation in claims 39-42 that PL 149319 teaches to add paste to lower the brazing temperature. In view of said teaching in PL 149319 that it is contemplated within ambit of ordinary skill artisan to eliminate paste when lower brazing temperature is not needed. It is well settled that omission of an element (here paste and carrier) and its function where not needed is obvious. Ex parte Rainu, 168 USPQ 375 (PTO Bd. of App. 1969) and In re Karlson, 136 USPQ 184 (CCPA 1963).

Claims 35-42 are rejected under 35 U.S.C. § 103 as being unpatentable over EP 465861 in view of CN 1060052. (References are cited in parent application).

Claims 22, 25, and 35-42 are rejected under 35 U.S.C. § 103 as being unpatentable over SU 1706816 in view of CN 1060052. (References are cited in parent application).

EP 465861 or SU 1706816 in the abstract discloses the features including the claimed solid brazing components – Cu alloy solder. The difference between and the claims are as follows: EP 465861 or SU 1706816 does not disclose the claimed liquidus, solidus, thermal arrest temperatures, and forms of the brazing component. However, the claimed liquidus, solidus, and thermal arrest temperatures are material properties which would have been inherently possessed by the material disclosed by cited references. Therefore, the burden is on the applicant to prove that the product of the prior art does not necessarily or inherently possess characteristics attributed to the claimed product.

In re Best, 195 USPQ, 430 and MPEP § 2112.01.

With respect to the form of the brazing component, CN 1060052 discloses brazing solder component could be formed into rods, ingots, strips, or powder. Therefore, it is contemplated within ambit of ordinary skill artisan to form the brazing component into form suitable for the brazing application such as a rod without paste and carrier. It is well settled that the form of reactants is believed mere a choice between well known forms of such substances. In the absence of evidence of some unobvious aspect of their selection, use of those substances would seem to add nothing of patentable significance to the instant claims. In re Austin, et al., 149 USPQ 685, 688.

Claims 22, 25, and 35-42 are rejected under 35 U.S.C. § 103 as being unpatentable over CN 1060052. (References are cited in parent application).

Claims 1, 5, 22, and 35-42 are rejected under 35 U.S.C. § 103 as being unpatentable over USP 3674471 to Joseph.

CN 1060052 (abstract) or Joseph (col. 1, line 55 to col. 2, line 3) discloses the features including the claimed solid brazing components and structures. The difference between cited references and the claims are as follows: Cited references do not disclose the claimed liquidus, solidus, and thermal arrest temperatures. However, the claimed liquidus, solidus, and thermal arrest temperatures are material properties which would have been inherently possessed by the material disclosed by cited reference. Therefore, the burden is on the applicant to prove that the product of the prior art does not necessarily or inherently possess characteristics attributed to the claimed product. In re Best, 195 USPQ, 430 and MPEP § 2112.01.

Response to Arguments

Applicant's arguments filed May 31, 2005 and arguments and declarations filed on September 6, 2005 have been fully considered but they are not persuasive.

Applicant argues the brazing material of PL 149319 is not in solid form. But, Cu alloy powder is a solid powder form and instant rejected claims do not exclude paste carrier.

Applicant's argument with respect to Sn and P in brazing material of PL 149319 in pages 6-8 is noted. But, applicant failed to provide factual evidence by declaration that the claimed P and Sn proportions are critical. The recitation of "consisting essentially of" limits the scope of a claim to the specified ingredients and those that do not materially affect the basic and novel characteristics of a composition. Ex parte Davis, et al., 80 USPQ 448, 450 (PTO Bd. App. 1948), In re Janakirama-Rao, 317 F. 2d 951, 137 USPQ 893, 894 (CCPA 1963), In re Garnero, 412 F 2d 276, 162 USPQ 221, 223 (CCPA 1969), and In re Herz, et al., 190 USPQ 461, 463 (CCPA 1976). When applicant contends that modifying components in the reference composition are excluded by the recitation of "consisting essentially of" applicant has the burden of showing the basic and novel characteristic of his/her composition - i.e. a showing that the introduction of these components would materially change the characteristics of applicant's composition. In re De Lajarte, 337 F 2d 870, 143 USPQ 256 (CCPA 1964) and Ex parte Davis, et al., 80 USPQ 448, 450 (PTO Bd. App. 1948). Moreover, claimed P and Sn proportions are overlapped by the proportions taught in said reference. Examples of cited reference are used for illustration not for limitation.

Applicant's argument with respect to CN 1060052 is noted. Examiner reiterates the response immediately above.

Applicants' declarations are noted. But, said declarations fail to show claimed brazing alloy elements have criticality or unexpected result.

The instant declarations show that brazing paste of PL 149319 requires high melting temperature. But, the phrase "The paste permits brazing below 973 K ..." does not mean brazing temperature must be lower than 973 K. The phrase merely means the paste could be added to lower the Cu based brazing material to a lower brazing temperature. Furthermore, instant claim 1 requires liquidus temperature above 840 °F and up to 1410 °F (instant claim 5).

Applicants' argument as set forth in page 12, first full paragraph is noted. But, Alloy F in the declaration has composition anticipated in instant claim 1. But Alloy F is also in the unsatisfied alloy list. Moreover, Alloy compositions of I, J, and K (See pages 7-8 of second affidavit) are total different from instant claim 1 which requires Ni and Ag. Compositions of alloys I, J, and K are filed after Final rejection mailed December 1, 2004. PL 149319 teaches to add paste to lower the brazing temperature (see abstract of PL 149319). In view of said teaching in PL 149319 that it is contemplated within ambit of ordinary skill artisan to eliminate paste when lower brazing temperature is not needed. It is well settled that omission of an element (here paste and carrier) and its function where not needed is obvious. Ex parte Rainu, 168 USPQ 375 (PTO Bd. of App. 1969) and In re Karlson, 136 USPQ 184 (CCPA 1963).

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Conclusion

Applicant is reminded that when amendment and/or revision is required, applicant should therefore provide a concise explanation and support with page and line number in the specification for any amendments made to the disclosure. See 37 C.F.R. Part §41.37 (c)(1)(v).


Examiner Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to S. Ip whose telephone number is (571) 272-1241. The examiner can normally be reached on Monday to Friday from 5:30 A.M. to 2:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dr. Roy V. King, can be reached on (571)-272-1244.

The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


SIKYIN IP
PRIMARY EXAMINER
ART UNIT 1742

S. Ip
October 6, 2005